



# RCA Amateur Radio Club Indianapolis, IN

ARRL Affiliated Club

[www.w9rca.org](http://www.w9rca.org)

DECEMBER 2023

MONTHLY NEWSLETTER

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE TUESDAY, DECEMBER 12th,  
6:30 PM AT NORTH SIDE EVENTS, FORMERLY THE KNIGHTS OF COLUMBUS,  
2100 EAST 71<sup>st</sup>, INDIANAPOLIS, IN

## RCA ARC NEWS

**NOVEMBER MEETING SUMMARY** – Thanks to everyone who attended the November meeting. Field day results, the Indy United Club finished third in the nation as we discussed last month. The GOTA station was a big deal as GOTA QSOs are worth 5 points. It has been observed that the Indiana Repeater Council has not been very active in the last year. Our Club will continue to pay the yearly dues. John, KF9UH, has acquired for the Club one of those Windows compatible minicomputers. This will replace the XP computer at the repeater site that runs Echolink. Jim, K9RU, reported our current Club insurance policy will not be renewed. We will probably go with the ARRL insurance. Upcoming contests were discussed, (see below). For those interested in HF propagation, take a look at VOCAM: <https://www.voacap.com/hf/> John, W9JS, discussed AuxCom, how it related to ARES, RACES as well as GMRS, REACT and others. .

## AMATEUR RADIO LICENSE TEST SESSION

**Date:** Saturday, December 9<sup>th</sup>, 2023  
**Time:** Starting at Noon **by appointment only.**  
**Location:** Salvation Army EDS Training Facility, 4020 Georgetown Rd  
Indianapolis, IN 46254-2407  
**Contact:** Jim Rinehart Ph: (317) 721-1458  
**Email:** [testing@indyradioclub.org](mailto:testing@indyradioclub.org)  
**Required:** FCC FRN and a completed NCVEC 605 license application form.

**Laurel VEC test sessions:** <https://www.laurelvec.com/?pg=exams>

## HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Salvation Army Open Net, Thursday, 7PM, W9RCA repeater, 146.88 MHz, tone 88.5 Hz

Nov 18-29 ARRL Sweepstakes, phone <http://www.arrl.org/news/2023-arrl-november-sweepstakes-continues>

Dec 9-10 ARRL 10 Meter Contest <http://www.arrl.org/10-meter>

Jan 6 ARRL Kids Day

Jan 6-7 ARRL RTTY Roundup

**WA7BNM** expanded contest calendar, <https://www.contestcalendar.com/>

Visit the **ARRL Special Event Stations database** at [www.arrl.org/special-event-station](http://www.arrl.org/special-event-station) to find other on-the-air events and commemorations.

**Hamfest or Convention:** [www.arrl.org/hamfests](http://www.arrl.org/hamfests)

**Find a license exam in your area:** [www.arrl.org/exam](http://www.arrl.org/exam)

**ARRL Home:** [www.arrl.org](http://www.arrl.org)

## ARRL HAILS FCC ACTION TO REMOVE SYMBOL RATE RESTRICTIONS

ARRL reports that Monday, November 13, 2023, the FCC Commissioners unanimously voted to amend the Amateur Radio Service rules to replace the baud rate limit on the amateur HF bands with a 2.8 kHz bandwidth limit to permit greater flexibility in data communications.

"The Federal Communications Commission today [adopted](#) to incentivize innovation and experimentation in the amateur radio bands by removing outdated restrictions and providing licensees with the flexibility to use modern digital emissions," [announced](#) the FCC.

"Specifically, we remove limitations on the symbol rate (also known as baud rate) -- the rate at which the carrier waveform amplitude, frequency, and/or phase is varied to transmit information -- applicable to data emissions in certain amateur bands," concluded the FCC [Report and Order and Further Notice of Proposed Rulemaking](#) (DA/FCC # FCC-23-93; WT Docket No. 16-239) adopted November 13, 2023. "The amateur radio community can play a vital role in emergency response communications, but is often unnecessarily hindered by the baud rate limitations in the rules."

Consistent with ARRL's request, the amended rules will replace the current HF restrictions with a 2.8 kHz bandwidth limit. "We agree with ARRL that a 2.8 kilohertz bandwidth limitation will allow for additional emissions currently prohibited under the baud rate limitations while providing sufficient protections in the shared RTTY/data subbands," concluded the FCC Report and Order.

ARRL President Rick Roderick, K5UR, hailed the FCC's action to remove the symbol rate restrictions. Roderick stated that "this action will measurably facilitate the public service communications that amateurs step up to provide, especially at times of natural disasters and other emergencies such as during the hurricane season. Digital technology continues to evolve, and removing the outmoded data restrictions restores the incentive for radio amateurs to continue to experiment and develop more spectrum-efficient protocols and methods while the 2.8 kHz bandwidth limit will help protect the shared nature of our bands. We thank Congresswoman [Debbie] Lesko (AZ-08) for her efforts on behalf of all amateurs to get these restrictions removed."

In a Further Notice of Proposed Rulemaking (FNPRM), the FCC proposes to eliminate similar restrictions where they apply in other bands. "We propose to remove the baud rate limitation in the 2200-meter band and 630-meter band... and in the very-high frequency (VHF) bands and the ultra-high frequency (UHF) bands. Additionally, we seek comment on the appropriate bandwidth limitation for the 2200-meter band, the 630-meter band, and the VHF/UHF bands." ARRL has previously expressed its support for eliminating the symbol rate limits in favor of bandwidth limits where they apply on the VHF and UHF bands but suggested that the bandwidth limits themselves be reviewed in light of today's technology and tomorrow's possibilities. Similarly, when eliminating the baud limits on the 2200- and 630-meter bands, consideration should be given to what, if any, bandwidth limits are appropriate.

The new rules will become effective 30 days after being published in the [Federal Register](#). The FCC will announce a period for public comment on the additional proposed changes based upon publication of the FNPRM in the *Federal Register*. No date has been set for publication.

## ARRL ADVOCACY WIN: FCC APPROVES REQUEST FOR PEARL HARBOR DAY CROSSBAND OPERATIONS

ARRL The National Association for Amateur Radio® sought a waiver on behalf of the activators, and the Federal Communications Commission (FCC) has granted it. The waiver allows amateur radio operators to participate in a special event commemorating the 82nd annual National Pearl Harbor Remembrance Day.

The Battleship Iowa Amateur Radio Association (BIARA), with authority from the US Navy and Southwest Marine Corps Spectrum Office, will honor the sailors and ships previously homeported in San Pedro, California, who were attacked on December 7, 1941. There will be special crossband activations of NEPM, Battleship Iowa's original call sign, on December 6, 7, 8, and 9, 2023.

Using the call sign NEPM, the club will transmit on assigned military frequencies and listen for calls from the amateur radio community on their adjacent bands. NEPM will transmit on 14.375, 18.170, and/or 21.856 MHz on J3E/USB and/or A1A/CW. The club operator will tell participating hams where BIARA will be listening, which will be 10 KHz below the top of each adjacent band when working J3E/USB, or 10 KHz above the bottom of each adjacent band when working A1A/CW. Amateur participants are reminded not to transmit on the NEPM military frequencies. Operations on all 4 days are expected to be from 0700 to 1600 PST (1500 to 2400 UTC).

The FCC stated the grant of the waiver meets the second prong of the waiver standard in section 1.925(b)(3)(ii) in that the event presents a unique opportunity for the amateur and military communities to practice communication skills under the guidance of military officials, which may be useful in the future and serves the public interest.

In addition to the skills gained by amateur operators participating in the test, National Pearl Harbor Remembrance Day has historical significance. It emphasizes the importance of reliable communications and the need to be vigilant in national defense.

If amateur radio operators who wish to participate are licensed in a country outside the US, BIARA advises to check the terms and conditions that govern their respective licenses.

QSL procedures can be found at <https://biara.org>. For specific questions before the operation, email [w6hb@biara.org](mailto:w6hb@biara.org).

## THE FIRST WORKED ALL STATES CERTIFICATE AWARDED FOR THE 33-CENTIMETER BAND (900 MHZ)

On November 4, 2023, Al Ward's, W5LUA, 38-year quest to contact all 50 states on the 33-centimeter band ended when he received the first-ever Worked All States (WAS) certificate for (902 - 928 MHz). Ward started collecting states on the band shortly after it was opened in 1985.

"I am extremely grateful to Peter Van Horne, KA6U, for his EME [Earth-moon-Earth] efforts. I was able to work Wisconsin for my last state [on] the 33-centimeter band on October 21. At the end of September, I was sitting at 32 states confirmed with cards and/or the Logbook of The World (LoTW), when Van Horne went on a 25-state expedition providing my last 18 states," said Ward. In recent expeditions, Brian McCarthy, NX9O, and Jason Baack, N1AV, also provided several states that were needed.

Ward's station consists of a 5-meter dish with 400 W of power obtained from two 300 W Motorola amplifiers in parallel. His feed is a dual polarity patch feed.

ARRL Radiosport and Regulatory Information Manager Bart Jahnke, W9JJ, was one of the first people to congratulate Ward on his accomplishment.

Jahnke stated, "Hearty congratulations! It's my privilege to confirm the ARRL Awards Department has received your WAS application, plus Card Checker document, and we have issued the 33-centimeter (902 - 928 MHz) Worked All States Award number 1 to you in culmination of your 38-year quest to contact all 50 states on the 33-centimeter band."

Other stations on the hunt for the 33-centimeter WAS certificate that are nearing completion include AC0RA, K0DAS, and N1AV.

In 1985, the Federal Communications Commission allocated the frequency band between 902 and 928 MHz to Part 18 industrial, scientific, and medical (ISM) equipment. In that proceeding, the band was also allocated to the Amateur Radio Service on a secondary basis, meaning amateurs could use the band if they accepted interference from and did not cause interference to primary users.

## ARDC AND ARRL ANNOUNCE \$2.1 MILLION FOR THE NEXT GENERATION OF AMATEUR RADIO

SAN DIEGO, California and NEWINGTON, Connecticut – Today, Amateur Radio Digital Communications (ARDC) and The ARRL Foundation announced a three-year commitment with over \$2.1 million in combined funding to support scholarships for radio amateurs, radio technology for classroom teachers, and amateur radio club grants. This commitment reinforces a strong shared vision between ARRL The National Association for Amateur Radio® and ARDC to invest in the future of amateur radio through programs supporting the next generation of radio amateurs.

"ARRL and ARDC share a common vision for the future of Amateur Radio," says The ARRL Foundation President David Norris, K5UZ. "The Foundation exists to support the next generation of radio amateurs, and we are so proud to collaborate with ARDC to make these programs possible."

The ARDC Scholarship at The ARRL Foundation has supported nearly 100 amateur radio operators in pursuit of their educational goals since its inception in 2020. The renewed commitment will result in over 200 total scholarships, awarded over the next three years, for radio amateurs pursuing higher education, with scholarships ranging from \$5,000 to \$25,000. This competitive scholarship program is run through The ARRL Foundation Scholarship Program, and recipients who demonstrate academic excellence and financial need can use this funding for tuition, room & board, books, and other fees essential to advance their education. More information on eligibility and application deadlines may be found online at The ARRL Foundation website at [www.arrl.org/scholarship-program](http://www.arrl.org/scholarship-program).

Read more: <http://www.arrl.org/news/ardc-and-arrl-announce-2-1-million-for-the-next-generation-of-amateur-radio>

## FLORIDA HAMS MAKE CONTACT 100 MILES APART VIA 10-METER REPEATER... IN SWITZERLAND

When 10 meters is open, amazing things can happen. Lu Romero, W4LT, knows that well. He said, "When 10 is open, I often venture up into the top of the band to see if there is any FM activity. I've always liked to use 10 FM, especially when conditions are marginal to observe the Faraday phase distortion on signals. Before FT8, 10 FM was always a good way to discover where the band was propagating to in addition to the beacons. If you hear FM (especially repeaters) operating, then the propagation is really good!"

At around 1500z on October 23, 2023, the band was open. Romero stated that he went to the top of the band and "found multiple signals in both simplex and via repeaters."

"Usually, I receive a repeater in New York City, KQ2H, one of the strongest signals I can get down here in Florida when 10 is open, but today there was another strong signal [of] 10 kHz above it," he said.

Using a FLEX-6400 at 75 W and the C32XR beam at 108 feet that he maintains for the [Tampa Amateur Radio Club](#), he heard an ID through the splatter from the KQ2H repeater. "It was [HB9HD in Switzerland!](#) I set up for split and reduced power to 75 W on the Flex and gave the repeater a kerchunk." Romero was able to contact a Swiss ham, Rene, HB3XVR, on the repeater's 70-centimeter link.

Then, on October 31, again around 1500z, Romero tried the repeater once more. "I found the repeater full quieting, even stronger than it was on October 23, and with no QRM from KQ2H, so it was clean and easy to copy!"

For the heck of it, I called CQ several times on the repeater. I received no callers, but finally, I received a signal that was fading up and down. I called again and that signal stopped fading for a while, and I was able to work David, WA3LXD, over the HB9HD repeater. After a little while, his signal settled down, and David asked me what my QTH was, and I told him I was in Tampa. He laughed and said we worked each other 'the hard way,' because he was in Ocala, about 100 miles to my north," said Romero.

As Solar Cycle 25 continues to rise toward its peak, amateurs can expect to encounter more exciting propagation, especially on the 10- and 6-meter bands. In this case, the signals traveled roughly 9,800 miles round trip. Your mileage may vary.

## THE NATIONAL CONFERENCE OF VOLUNTEER EXAMINER COORDINATORS (NCVEC) QUESTION POOL COMMITTEE (QPC) HAS REMOVED TWO GENERAL-CLASS LICENSE QUESTIONS.

Pursuant to the November 13, 2023, FCC rule change to remove symbol rate restrictions on amateur radio digital emissions (<http://www.arrrl.org/news/arrrl-hails-fcc-action-to-remove-symbol-rate-restrictions>), the QPC of the NCVET has deleted two questions from the General-class question pool because they are no longer correct. General-class questions G1C08 and G1C10 are withdrawn from the pool effective immediately and should be removed from examinations as soon as possible. Updated question pool files, including the errata and new information, have been posted on the NCVET General-class question pool web page at <http://www.ncvec.org/page.php?id=369>. The current Element 3 General question pool became effective on July 1, 2023, and it is valid through June 30, 2027. The [ARRL VEC](#) advises the community to regularly check the NCVET website at <http://www.ncvec.org/> for updates to the question pools, which may include errata and withdrawn questions.

## SUMMITS ON THE AIR (SOTA) IS OFFERING A 10-METER CHALLENGE IN 2024

The challenge will run from 0000 UTC on January 1, 2024, to 2359 UTC on December 31, 2024. Solar Cycle 25 is beginning to create regular favorable DX conditions on the higher bands, and early predictions indicate the cycle peak may occur during the summer of 2024. SOTA held a 12-meter Challenge in 2013, and since then, more than 90 associations have been added to the SOTA program, including many in South America, the Caribbean, and Asia. There is excellent potential for DX SOTA activity, and activators are encouraged to consider 28 MHz for their summit operations in 2024. Scoring will be done automatically by the database software. Activations and chases should be entered as normal. The software will note 10-meter QSOs and score them according to the rules. Usual SOTA rules will apply. Multi-band activations can also be entered as normal, and all results will be updated. Qualifying 10-meter QSOs will be scored separately from other SOTA activity. There will be a special 10-meter Challenge results page, and electronic certificates will be issued for all participants with their name, call sign, association, and score. For more information, including the rules for the challenge, visit the [Summits on the Air](#) website.

## FCC HIRING FOR MARYLAND FACILITY

In what could be a perfect job for a radio amateur, The Federal Communications Commission (FCC) is hiring a Telecommunications Specialist. The position is based at the Public Safety & Homeland Security Bureau, Operations and Emergency Management Division, High Frequency Direction Finding Center in Columbia, Maryland.

The Telecommunications Specialist will perform "watch duty" and serve as a technical authority providing technical assistance and guidance to communication systems users to resolve radio interference complaints and problems and collect radio signal analysis information.

Detailed information about the position, its qualifications, and how to apply can be found at <https://www.usajobs.gov/job/758731700>.

**Editors Note:** *ARRL also seeks qualified applicants for the position of Sr. Lab Engineer at our Newington, Connecticut Headquarters. ARRL is an equal opportunity employer.*

## TECHNICAL

### **ARRL RF Safety Committee Develops New Guidelines to Communicate RF Safety**

Radio amateurs now have a new tool from ARRL to help answer questions about their stations. Neighbors of amateur radio operators are sometimes concerned about transmissions and radio frequency exposure from amateur stations.

The [ARRL RF Safety Committee](#), with their international counterparts at the Radio Society of Great Britain (RSGB), the Irish Radio Transmitters Society (IRTS), and the Swedish Society of Radio Amateurs (SSA), has developed a new set of guidelines to help amateurs interact with and talk to their neighbors about RF exposure.

Chairman of the ARRL RF Safety Committee Greg Lapin, N9GL, said the new informational PDF found on the ARRL RF Exposure page, [Helping Amateurs Interact with Neighbors Asking About Radio Transmissions](#), was developed after a year of discussions about RF safety.

"Neighbors may be alarmed by some of the misinformation about RF safety that is available from a variety of sources. By following the exposure regulations from the Federal Communications Commission, we can be confident that our families and neighbors are safe," Lapin said.

Lapin added that RF exposure regulations are based on decades of trustworthy research. He also encouraged all amateur radio operators to perform exposure assessments for their stations to make sure they meet those regulations.

## SHORTS

**Is your station properly grounded?** Here are links to many web sites;

<http://www.no1pc.org/ground/groundref.htm>

**Ten meters has been quite productive for long-distance contacts recently, which should favor participation in the [ARRL 10-Meter Contest](#) during the weekend of December 9.** In addition to US states and Canadian provinces and territories (plus Labrador), Mexican states are multipliers.

**During the weekend of December 16, DX contests** include the [OK-DX RTTY contest](#), or the [Croatian DX Contest](#) for CW and phone. On December 17, you can listen for "CQ RR" on CW, and work a few Rookies in the [ARRL Rookie Roundup](#).

**The [SETI Institute](#), a non-profit scientific research organization, recently announced that they received a philanthropic gift of \$200 million from the estate of Franklin Antonio, N6NKF (SK).** The funding will be used to detect signals of life and intelligence in the universe. Antonio, who passed away in 2022, was a long time ARRL Member and is best known to radio amateurs as the author of the, *Instant-Track* orbital tracking software that AMSAT sold for many years. Phil Karn, KA9Q, says, "Franklin's personal involvement in the SETI Institute as an engineering consultant took them a long way in the few years he was involved."

**Cheap Geo-clock computer or just the free software:** <https://www.youtube.com/watch?v=dFYnthSdY3g> or the free software: <https://www.youtube.com/watch?v=nxhw-HNIIYo>

**Ham Radio of 2023 | Top HT Radios:** [https://www.youtube.com/watch?v=LLIxRV\\_a\\_R0](https://www.youtube.com/watch?v=LLIxRV_a_R0)

**Registration for the 2024 [International DX Convention](#) opened on November 15, and the convention takes place April 12 - 14, 2024, in Visalia, California, at the Visalia Convention Center.** This is the 75th year of this event, and it's sponsored alternately by the Southern California DX and the Northern California DX clubs. DX University and Contest Academy are held the day before the start of the DX Convention.

**Carl Luetzelschwab, K9LA, presented, "Topband: Solar Cycle 25 Update," to the Madison DX Club.** You can watch a recording of the presentation on the [club's Programs web page](#).



Lance Collister, W7GJ, notes that the **VE7BQH Antenna Comparison tables for VHF/UHF antennas have been updated**. "Added in this issue is the ability to read the Figure of Merit as G/T or S/N, as well [as] the addition of a WD5AGO 13 element in the 432 MHz band." The table is on Lance's website: <http://www.bigskyspaces.com/w7gj/6mTable.htm>.

Gerry Hull, W1VE, [tweeted that he has new software available](#) to control IP relays using [N1MM Logger+](#). These inexpensive boards are available from multiple vendors on Amazon and from other sources. He also promises to soon have a version that "supports the inexpensive Chinese Rs232 AT-command boards and Tuya Wi-Fi relays."

Bob Witte, K0NR, [suggests using the FAA's weather webcams to check weather in the vicinity of planned SOTA operations](#). He notes that some summits in the western US have cameras, and they're generally available across the country.

The article, "[Anomalous propagation and the sinking of the Russian warship Moskva](#)," suggests that unusual microwave propagation conditions allowed for a ground-based radar to be used well beyond its normal radar horizon to target the warship. Sal AI, 9K2GV, blogged about "[Elevated Tropospheric Ducting](#)" with some useful illustrations.

***Merry Christmas, Happy Holidays!***

***THANKS FOR READING***

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THE RCA ARC MONTHLY NEWSLETTER IS COMPILED AND EDITED BY JIM RINEHART, K9RU AND JIM KEETH, AF9A. ALL MATERIAL CONTAINED HEREIN IS OBTAINED FROM THE SOURCES CREDITED AND EDITED FOR THIS NEWSLETTER.

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